
SHAPING THE NEXT NORMAL – EXPLORATIVE EXPERT SURVEY AMONG TEACHERS

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Abstract

The Covid 19 pandemic has fundamentally changed the importance of digital HEI teaching. The digitisation of a course of study poses many challenges for teachers. This paper presents the results of a survey of lecturers at the DHBW (Baden-Wuerttemberg Cooperative State University). Challenges and opportunities were examined in order to derive recommendations for good digital teaching for the future. This paper is based on three pillars: (a) recommendations for good online teaching, (b) a list of the institutional support requirements, and (c) a foresight on the future of digital teaching.

In summary, it can be seen that teaching concepts have changed fundamentally as a result of the Covid-19 pandemic. While some courses have been converted to online frontal teaching, other formats promote the self-learning process of students by emphasising self-study, with teachers moving away from the classic role of knowledge mediators and increasingly acting as coaches. This can be seen as an effort to make the best possible use of the new conditions created by the pandemic in order to move higher education teaching from pure knowledge transfer to competence transfer.

The aim of the present analysis is to promote the digitization of courses in the long term and to make lasting improvements. The results should help teachers to design their courses efficiently and in a way that is appropriate for the target group and to improve the quality of teaching in the long term.

Keywords: Future Higher Education, Online Teaching, Survey, Digitization, Visions, Recommendations

Introduction

Times of crisis pose great challenges for higher education institutions. The interruption of all on-campus teaching due to the corona pandemic during the summer semester 2020 has revealed the dynamics of how educational processes are already and will be organised in the future. The present paper aims to identify approaches and parameters for organising the upcoming winter semester and beyond and for successfully shaping the new normality.

Digitisation of (higher education) teaching has been significantly accelerated by the crisis. Still at the beginning of the year, it was broadly discussed as an important challenge to be met in the future, since digital teaching formats offer numerous potentials for higher education teaching. Flexibilisation, individualisation and quality enhancement processes at all levels of higher education can be promoted by new technologies. In other words, what has been considered to be a prospect that requires numerous barriers to be overcome, was largely implemented across the whole HEI sector within a few days: the transformation of the entire analogous teaching to online teaching formats was carried out spontaneously and without any possibility to preparing or training online methods and techniques. Now that online teaching is no longer just an option, it has become the necessary cultural technique to maintain teaching operations. According to experience reports, this transition appears to have been quite successful so far and, overall, positive (<https://hochschulforumdigitalisierung.de/de/blog/retrospektive-digitalsemester-communitystatements>).

This paper presents the results of an exploratory expert survey among teachers at the Baden-Wuerttemberg Cooperative State University. In this special situation of lack of knowledge and insecurity regarding the field of online teaching, the study explores whether and how the existing concepts of online teaching are experienced and provides first indications on which of those will play a special role for the future of online teaching. The paper presents the results on the basis of three components: first, recommendations for good online teaching are presented, which were derived from the interviews. Next, the support needs and contextual conditions are explained. Finally, the visions for a digital future in higher education teaching are presented.

Research Methodology

In order to generate knowledge about particularly sustainable future concepts for the design of online teaching, starting from this special situation, in which a complete transformation of the entire teaching organisation from onsite to online teaching had to take place, an empirical-qualitative exploration was carried out based on a query of teachers at the Baden-Württemberg Cooperative State University who have proven extensive and successful expertise in this teaching form and its integration into the HEI.

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For the identification and selection of this highly selective sample, an expert-based proposal method was chosen, supported by a cross-faculty support service that assists teachers in the conception and implementation of innovative, digitally enhanced teaching formats. Due to the explorative research design, in addition to the proven expertise, the aim was to achieve maximum differentiation in terms of subject areas. The principle of diversity enables a broad range of explanatory power of the theoretical reconstruction (Ehlers, 2011). A total of eleven interviews have been realised. The covered disciplines were Industrial Engineering, Civil Engineering, Business Informatics, Education Management, Entrepreneurship, Business Studies, Media and Communication Management, Education, Social Services, Auditing and Accounting.

In order to obtain qualitative data, semi-structured guideline-based in-depth interviews involving cover sheets have been conducted. The open design allows for exploration and in-depth analysis at points where the respondents' narrative structure suggests so (Mayring, 1997; 2002).

The expert survey was based on a multi-dimensional interview guideline, which was discursively validated in several rounds. To ensure the comparability of the results, the interview guide is based on three dimensions: (a) time dimension, (b) teaching dimension and (c) thematic dimension.

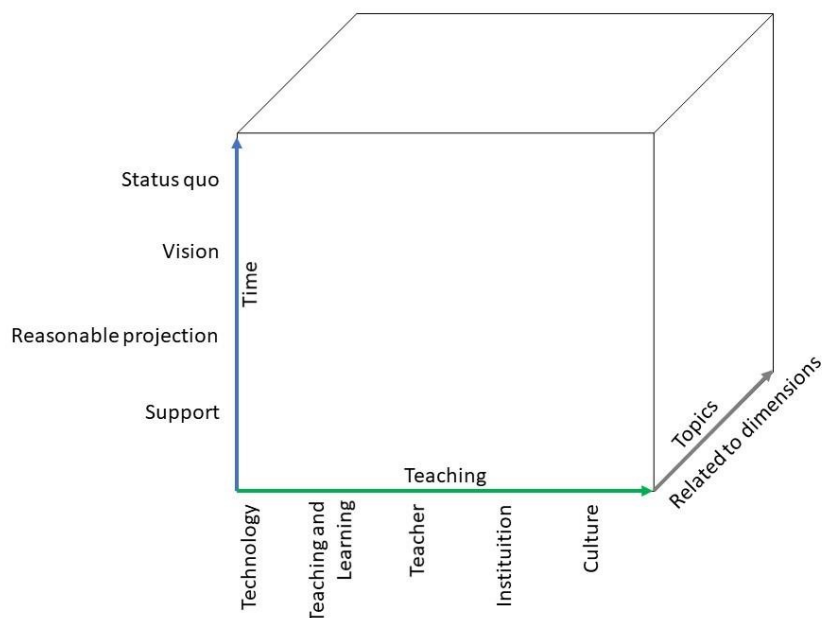


Figure 1. Structure of the interview guideline

The time projections record the status quo, the respondents' vision, a reasonable projection, and the support required from the institution to realise the vision.

The teaching-related dimension addresses technology, teaching and learning, teachers, organisation and culture. This refers not only to the recording of technological tools for digital teaching, but also to the delivery of learning content, the role of teachers, the conditions at the meso and macro levels and the organisational culture. The topic-related dimension specifies the elements of the teaching-related dimensions by considering individual subject areas.

The qualitative data was collected through written documentation of the interviews using keyword protocols. The analysis of the qualitative data follows the technique of qualitative content analysis (Mayring, 1997; 2002) through two evaluation steps:

- The first evaluation step, a summarising content analysis, reduces the interview content to key messages by shortening, paraphrasing and generalisation.
- The second evaluation step is a structuring content analysis (ibid.), in which the content is clustered, organised and structured according to the underlying concepts. An inductive procedure is used to establish a category framework derived from the material using pattern analysis. As the focus here is identifying recommendations, future visions and support needs, not all information has been considered in the analysis.

Recommendations for good online teaching

Although difficulties with regard to technical equipment and barrier-free teaching, assessment and participation offerings that will continue to pose challenges for teachers and students in the next semester cannot be solved solely by the design of the teaching, the interviews reveal tendencies towards measures to successfully and sustainably establish the opportunities of digital and online teaching formats beyond the corona pandemic in order to enable everyone to benefit equally from the advantages.

Onboarding: Activating students and maintaining attention

Teachers repeatedly stress the special importance of onboarding measures. This can be achieved, for example, by conducting activating exercises at the beginning of the sessions, which should, however, also be used in the further course of an online event to regularly motivate students and maintain their attention. This applies not only, but especially, to phases of chalk and talk.

Communication: Reliable, fast and easy

A second central aspect relates to the special requirements for communication between teachers and students, which arise from the elimination of face-to-face meetings. A regular, reliable, uncomplicated and timely way of communication and low-threshold communication channels are repeatedly emphasised as being of fundamental importance.

An example for good practice that illustrates this is a weekly opening email that structures the upcoming week by summarising all expectations and commitments.

Learning support: Help and support

Practical support for students has also repeatedly been mentioned as a central component of good online teaching. Examples of this are, in addition to the weekly mails mentioned above, reminders, information documents or timetables from the teachers.

Learning support: Feedback structures

For the implementation of blended learning formats, it is essential that the (online) synchronous teaching sessions are well structured. The results of the self-study phases can be presented and discussed. Coaching appointments during the self-study phases complement the feedback options. Teachers provide methodological and content-related advice and support, as well as hints on technical tools, etc., and thus contribute to the motivation of the students through the possibility of exchange.

Learning Support: Portfolio assessment

Continuous assessment facilitates the knowledge acquisition, as it enables a coherent and structured transition between the attendance and self-study phases.

Good preparation and support for synchronous online teaching

For the coaching sessions, especially if they take place online in breakout rooms where students can meet in small groups, good preparation of the teachers is important. This also applies to good and detailed preparation of the teaching concept before the start of the course.

Transparency and planning reliability

The tasks and artefacts to be performed should be defined and communicated in advance, as should the criteria for assessment evaluation. Transparency provides orientation for the students.

Software and hardware: Technical equipment is essential

When it comes to technologies the perspective is broad. In addition to the applications provided by the HEI for holding online conferences, other established solutions such as Zoom and Jitsi have also been applied successfully. All applications support the implementation of online presence teaching, whereby all applications have advantages and disadvantages. In order to make the (online) presence teaching as interactive and participatory as possible, appropriate technical equipment is required, which concerns both hardware and software. The application of collaboration tools, but also graphic tablets

for life sketching are some examples. Self-study is mostly organised via Moodle and communication is done via email. Students organise themselves and communicate independently during self-study, using numerous programmes, applications and messenger services, such as WhatsApp or Telegram, and platforms such as Google-Drive and Microsoft Teams. Digital teaching also requires adjustments regarding assessment measures. In addition to the analogue formats, which can also be used online, other measures such as portfolio assessment or open book exams are particularly suitable.

Needs for support

The COVID-19 pandemic has brought about a major step forward in the digitisation of teaching. In order to maintain the progress that has been made, targeted and strategic action by the institutions is essential. Support “top-down” is crucial for change and improvement “bottom-up”. In total, six requirements for the organisational structure have been identified, which depend on support from the meso and macro levels. The realisation of these can promote digital teaching and contribute to exploiting the potential on a broad level.

Secure knowledge management and knowledge transfer

In order to enable and promote the exchange of teaching materials, concepts and experiences among teachers, the HEI should provide an exchange platform. In order to support teachers in digitising their lectures, knowledge management and transfer should be organised in this area, summarising existing and recommended tools and the respective application possibilities. This should include web conference systems as well as other tools, for example for editing videos. In order to support and motivate the production of high-quality teaching material, appropriate technical equipment and software is required. This includes, for example, microphones and cameras, which can be borrowed if required.

Free and uncomplicated access to technical equipment

A space providing professional lighting and appropriate technical equipment should also be mentioned. This can contribute to the creation of high-quality instructional videos or podcasts.

Qualification and support services

Teachers are often prejudiced against digital formats due to ignorance or lack of expertise. Coaching and qualification offers as well as special support services for the realisation by technically experienced assistants can help to overcome this hurdle. This can also be done by students.

Renewal of remuneration concepts

With concepts such as blended learning, synchronous teaching is reduced. A remuneration system which only remunerates according to teaching hours is therefore not transferable to the structure of online teaching formats. Alternative remuneration models must be created, such as remuneration according to communication time as mentioned in the interviews. An appropriate organisational framework can increase the willingness to digitise the teaching offers in high quality.

High-quality teaching materials

In order to ensure and improve the quality of teaching, high-quality teaching materials must be provided or produced by in-house teaching staff. These should be used across the board and continuously developed.

Uniform, binding and transparent communication

Uniform, binding and transparent communication of the HEIs digital agenda can increase acceptance among all stakeholders of digital teaching as an integral part of their own teaching. This also includes communicating the expectations of the teaching staff, who can thus gain orientation and creatively design the lectures. In this respect, it is necessary to provide clear framework conditions which, however, also allow teachers sufficient creative freedom.

The future of digital teaching

The visions for the future of digital teaching relate to four aspects: Technology, teaching and learning, teaching, organisation and culture, which are summarised below in a trend monitor.

Summary and outlook

Driven by the special conditions of the digital summer semester 2020, the digitisation of teaching experienced an enormous acceleration. A topic that had just recently still been discussed as a challenge for maintaining sustainability and quality in the future is suddenly a necessary prerequisite for teaching. The corona virus is far from over and not only the coming winter semester has to be organised. Fortunately, the ad-hoc transformation of the entire on-campus teaching to online formats seems to be quite successful so far. In order to identify particularly viable concepts for online teaching in this extraordinary situation, this qualitative explorative study examined good teaching practice at the Baden-Württemberg Cooperative State University.

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Table 1:

	Vision	Short/medium term (3-5 years)	Long term (5-10 years)
Technology	A trend towards direct and personal communication is emerging: Messenger services such as WhatsApp and social networks such as Instagram are gaining acceptance and in some cases are already finding their way into digital teaching. Digital media such as online scripts, web videos and podcasts can be used to impart knowledge. For courses which are held exclusively in virtual form, these digital formats, in contrast to analogue formats, offer students the opportunity to adapt the pace of learning to their own needs. The use and further development of collaboration tools is also becoming increasingly important. This refers to conference tools such as Zoom or BigBlueButton as well as tools for collaborative writing such as Edupad. In the near future, artificial intelligence will also be introduced into digital teaching, which can further individualise and personalise teaching.	Direct and personal communication via instant messaging services. Use of digital media for knowledge transfer.	AI-based analyses support teachers and students.
Teaching and learning	Courses are increasingly taking place online. Learning is thus detached from the HEI. This creates new requirements to maintain the interest, motivation and attention of the students and to strengthen selforganisation. Interaction becomes indispensable online as well. In addition, there is a need for concepts to develop digital social presence.	Strategies for motivation, strategies for increasing digital social presence, online interaction, active dialogue, knowledge acquisition is self-directed and individualised.	Chalk and talk is being replaced by blended/hybrid learning; the focus is shifting from knowledge acquisition to competence acquisition.
Teachers	The role of teachers is also changing from knowledge transfer to learning guides or coaches. They support the students in the acquisition and consolidation of the teaching content. In order to be able to make full use of the possibilities of digital teaching, knowledge of the technologies and concepts of digital teaching is an integral part of the requirement profile.	High digital competence, continuous further training, teaching companion/facilitator/coach instead of knowledge mediator, digital didactic competence.	/
Institution	The need for participation at the macro and meso level also relates to the role of the Federal Ministry of Education and Research and the HEIs. Study course curricula can be increasingly individualised and personalised as a result of advancing digitisation. Increasingly location-independent teaching formats and thus a large number of polyvalent modules (larger optional courses, also across locations). Artificial intelligence can expand the space of the possible (e.g. recommender systems). Networking of teachers to exchange concepts, experiences and learning materials (exchange platforms, developing digital teaching as a value). Digitisation also influences performance measurement and assessment. New forms of examination that can be taken online will become established (e.g. open book exams or portfolio examinations). Since different forms of examination make sense depending on the subject area, teachers can ideally determine the form of examination themselves (greater flexibility and choice of examination forms by teachers).	Individualisation and personalisation of the curriculum, greater choice through cross-location courses, exchange forums, alternative examination forms.	/
(Organisational) Culture	Digitisation requirements for teaching will continue to increase. Due to the increased rate of academisation and digitisation, the target group of students will become more heterogeneous and diverse. Lifelong learning will also further increase the diversity and size of the student body. However, personal contact between teachers and students will remain a central resource.	Demands on digitisation of teaching are growing, personal contact remains essential.	The student body is expanding.

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The aim was to explore which components of online teaching in the digital summer semester should be maintained and transferred beyond the crisis of the pandemic. Based on the qualitative data analysis of an expert survey with teachers that have proven expertise regarding online teaching formats and its implementation into the HEI context, recommendations, future perspectives and support needs have been analysed and presented.

In summary, it can be seen that the success of digital teaching requires one thing above all: a comprehensive restructuring of teaching as a whole. Digital formats require an adaptation of the course curricula, an opening towards open educational resources and open cooperative teaching formats. Furthermore, the relevance of personal contact and rapid communication between teachers and students is emphasised as an important and central component of digital teaching. Furthermore, the importance of the conditions set by the institution of higher education is made clear. Change often occurs in a bottom-up manner, with driving forces within the organisation, an enabling and supporting structure and culture that facilitates this process in a top-down manner is thus essential. This applies to both technical and human resources, but especially to training and support services.

The present paper provides first indications of how the containment measures have affected teaching by presenting a survey among teachers at the Baden-Württemberg Cooperative State University Karlsruhe. Further research in this area and the extension to include the student perspective is recommended.

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